experiences of his previous life, yet he could not draw nor describe a map of any sort, not even the arrangement of the furniture in the rooms he had been accustomed to occupy, and that with his eyes either bandaged or uncovered his ability to find his way about was far below that of the average individual blind though a peripheral lesion. Förster draws the following conclusions: Since the retina is, for a small extent at least, intact, the color blindness cannot be of peripheral origin. In the occipital cortex are located the perceptions for topographical relations. Further, he takes the case to disprove the view that the crossed and uncrossed optic fibres are mixed in the fovea, (this explaining hemianopsia with the retention of vision in the fovea,) and, if I understand him correctly, assumes a complete crossing of the optic fibres and explains the retention of vision at the fovea by considering that the anastamotic connections of the vessels supplying the cortical centre are more complete for the part of the cortex representing the fovea, and hence that a plugging of the arteries as in this case affects vision at the fovea least and last of all. The ophthalmoscope had thus far revealed no atrophy in the optic nerve.

Case of cerebellar tumor with monocular diplopia as a symptom. A. B. SHAW. Alienist and Neurologist. July 1890. Vol. XI. No. 3.

The diagnosis is given in detail, and it is simply stated that the results of the autopsy were entirely concordant with it. The lesion was on the left side, and there was homonymous hemianopsia, and diplopia of the left eye.

Zur Lehre von der Kreuzung der Nervenfasern im Chiasma Nervorum opticorum. Dr. ANTON DELBRÜCK. Archiv f. Psychiatrie und Nervenkrankheiten. B. XXI. H. 3. 1890. 1 Taf.

The author first describes the optic nerves and tracts from an insane man of 70 years. As the patient never exhibited any noticeable disturbance of vision no examination of the eyes had been made, but at the autopsy the left optic nerve was found nearly completely degenerated, while the right was about half degenerated. The study of the specimen shows a connection between the optic nerves and optic tracts of the same sides, which is explained by considering that in this case it is mainly the uncrossed bundle of fibres which has been preserved. The general discussion of the course of the optic fibres contains a fundamental critique of the conclusions of Michel, whose advocacy of total decussation of the optic fibres some years since re-opened the whole question. In this connection Delbrüch shows that the ideas that the chiasma offered a resistance to the degenerative process and that degeneration was progressive, were freely used by authors reasoning on this question.

He considers that the study of the fibres in this region should be guided by the following practical rules: 1. If there are normal fibres in the optic nerves there must be corresponding normal fibres in the optic tracts. The converse also is true if the commissural fibres in the tracts are excluded. 2. If there are degenerated fibers in the nerves there must of necessity be degenerated fibres in the tracts, but these may be either plainly recognizable by their degenerated remains or may have undergone resorption to such an extent as to be no longer evident.

To these two, just given, the author adds several other suggestions:

a. In comparing a degenerated nerve which contains two groups of fibres with its mate which is normal, and drawing from this a conclusion as to the size of the degenerated portion it must always be remembered that the extent to which the degenerated portion has been resorbed will very materially influence the result. *b.* When one optic nerve is degenerated and both tracts are found almost or apparently completely normal the inference is valid, under certain conditions, that the degenerated fibres

did not form a compact bundle. At the same time the residua of even a compact bundle may disappear in the cases where resorption is very active, as in young animals, for example. *c.* If a compact bundle can be traced in a tract for some distance and then disappears, the possibility that the fibres may run for a time isolated and then intermingle with the others forming the nerve, must always be admitted.

Reviewing the literature in the light of the general conclusions thus given, the author proceeds to examine the evidence for the position of the crossed and uncrossed optic fibres both in the tract and in the nerve. The evidence is not decisive. In the optic nerve the uncrossed fibres form a more or less closed bundle; but whether its usual position is laterad, as indicated by the majority of the cases, or whether it is more often variable, is uncertain. In the tract the majority of authors report a more or less isolated condition of the uncrossed bundle and a lateral position. It is to be borne in mind, however, that just these cases were most liable to be reported, since in them the results of the lesion were most clear and definite. This entire paper is an unusually valuable contribution to this subject, and it may be noted in passing, that it was offered as a dissertation for the degree of M. D. at Leipzig.

Ueber die Folgen der Durchschneidung des Hirnbalkens. ALEXANDER v. KORÁNYI. Arch. f. d. ges. Physiologie des Menschen u. der Thiere. B. XLVII. H. 2 u. 3. Feb., 1890.

The work was done in the laboratory of Prof. Goltz at Strassburg. The author concludes that section of the callosum (in dogs) causes no marked disturbance, unless the hemispheres are at the same time injured. In case of such injury there may appear disturbances of vision, of tactual sensations and of motion, and that, too, when the injury of the white matter is to a portion far removed from that to which the respective functions are attributed. The disturbances, however, are transitory. Further, after section of the callosum, convulsions of the entire body may appear. There is wanting in this account the descriptions of the lesions, and the statement as to the number of experiments and the length of time that the animals survived the operation in each case, all of which data are necessary for the proper valuation of the results.

Further note on degenerations following lesions of the cerebral cortex. C. S. SHERRINGTON. The Journ. of Physiology. Vol. XI, Nos. 4 and 5.

When the pyramidal tract degenerates as a result of injury to the cerebral cortex, degenerated fibres are found in the following portions of gray matter, 1. Ventral gray *cornua* of spinal cord. 2. Lateral gray *cornua* of spinal cord. 3. Isolated gray masses in the *pons*, lying among the deep transverse fibres of the *pons*, (*stratum complexum pontis*) and close to the fibre bundles of the *crusta*. 4. A mass of gray matter lying in the mesal third of the crustal portion of the *crus cerebri*, (a well-defined mass in the monkey). 5. The *substantia nigra*, more especially the ventral portion of it. Interest attaches to these fibres, which are always of small size, because they are considered to be in connection on the one hand with the gray matter and on the other with the pyramidal fibres. In the spinal cord a degeneration of the fibres in the column of Clark has not been found associated with pyramidal degeneration. In cases of cortical lesion confined to the "leg area" a considerable number of fibres in the *substantia nigra* are found degenerated. To what animals these results apply is not stated.

Einiges über das Gehirn der Edentata. H. RABL-RÜCKHARD. Archiv f. Mikros. Anat. B. XXXV, H. 2. Mai. 1890. 1 pl.

From the examinations of cross-sections of the brain from a fully developed fœtal armadillo, (*Xenurus gyrunurus*), the author identifies a